

### REMARKS

In the Office Action dated January 21, 2004, claims 21-40 are pending and claims 21-40 stand rejected. In this response, claims 21, 30, and 39 have been amended.

Claims 21-40 are provisionally rejected under judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15-31 of copending Application No. 09/023,172 and claims 18-30 of copending Application No. 09/023,234. Since this is a provisional rejection, a terminal disclaimer will be submitted when the present application is allowed.

Claim 39 is objected to, because the phrase in line 6, "in dependent" should be changed to "independent". Applicant has amended claim 39 in accordance with the objection.

Claims 21-24, 26, 27, 30-33, 35, 36, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,045,781 to Levy ("Levy"). In view of foregoing amendment, applicant submits that claims 21-40 are not anticipated by Levy. Specifically, claims 21 and 30 are presently amended to more clearly claim that the memory module controller serves as a **direct** interface to the system memory controller. Levy, on the other hand, teaches using an associative memory between the memory management unit and the memory control and timing/memory tranceiver units (figure 1). Indeed, Levy teaches a data processing system that provides for overlapping data transfers without the need for multiple control pins (Col. 3, Lns. 57-61) using an associative memory to control asynchronous transfers from or to a location in other down-stream memory modules (Col. 4, Lns. 20-25).

Although the added limitation of a "direct" interface is intended to more clearly point out one aspect of Applicant's invention, it is not added to merely avoid the teachings of Levy. Applicant asserts that Levy does not teach interfacing a system memory controller to a memory management unit, but rather teaches using an intermediate associative memory to

interface a memory management unit to the memory control and timing/memory tranceiver combination. Furthermore, Applicant does not, in adding the limitations to claim 21 and 30 mentioned above, intend to limit the invention from using other interface logic coupled to the memory module controller unit to facilitate the communication between the system memory controller and the memory module controller.

Accordingly, it is respectfully asserted by Applicant that presently-amended claims 21 and 30 are not anticipated by Levy and is in condition for allowance.

Claims 25, 28, 29, 34, 37, 38, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy.

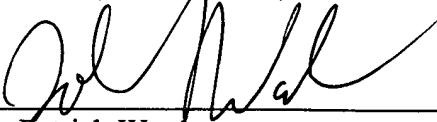
In view of the above amendments and arguments regarding claims 21 and 30, it is asserted by Applicant that limitations within claims 25, 28, 29, 34, 37, 38, and 40 are not taught or suggested by Levy, and are therefore not obvious in view of Levy. Accordingly, Applicant respectfully asserts that claims 25, 28, 29, 34, 37, 38, and 40 are in condition for allowance.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,

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